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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,824	01/16/2004	Zerong Lin	2004B003	6576
23455	7590	03/13/2006	EXAMINER	
EXXONMOBIL CHEMICAL COMPANY 5200 BAYWAY DRIVE P.O. BOX 2149 BAYTOWN, TX 77522-2149			LU, C CAIXIA	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/758,824

Applicant(s)

LIN ET AL.

Examiner

Caixia Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) 34-63 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-63 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/27/04, 2/15/05 & 2/23/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-33 and 63, drawn to a catalyst composition, classified in class 502, subclass 305.
  - II. Claims 34-36, drawn to a process of making catalyst, classified in class 502, subclass 120.
  - III. Claims 37-60, drawn to a polymerization process, classified in class 526, subclass 104.
  - IV. Claims 61-62, drawn to a ethylene polymer, classified in class 526, subclass 348.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be prepared by a materially different process wherein more solvent is used and/or in absence of an oxidizing gas.
3. Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different

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process of using that product. See MPEP § 806.05(h). In the instant case the process of using the product can be practiced with a different catalyst such as Ziegler catalyst containing titanium.

4. Inventions III and IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the polymer can be prepared by a different process wherein a Ziegler catalyst containing titanium is used.

5. Inventions I and IV, II and IV together with II and III do not fall within the scope of related and distinct inventions permitted by MPEP 806.05 (a)-(i).

6. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

7. Because these inventions are independent or distinct for the reasons given above and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

8. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

9. This application contains claims directed to the following patentably distinct species: different supports as claimed in claims 1 and 63. The species are independent or distinct because they are not obvious variation of each other.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.  
MPEP § 809.02(a).

10. During a telephone conversation with Attorney Catherine Bell on February 28, 2006 a provisional election was made with traverse to prosecute the invention of Group I and the support species of claim 1, claims 1-33. Affirmation of this election must be made by applicant in replying to this Office action. Claims 34-62 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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11. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Specification***

12. The disclosure is objected to because of the following informalities: in lines 29-30 of page 21, "MCM-41" is indicated to be describe in US 5,098,684. However, the examiner is not able to find the detailed description of MCM-41 in the cited patent.

Clarification is required.

***Claim Objections***

13. Claims 1-33 are objected to because of the following informalities: in the last line of claim 1, the term "less then" should be --less than--. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Beck et al. (US 5,057,296) and Beck et al. (US 5,200,058) respectively.

The instant claims are directed to a supported catalyst system wherein the support is a non-layered inorganic porous crystalline phase material having a hexagonal arrangement of uniformly-sized pores with an average pore diameter of 13A or more, a  $d_{100}$  value of 18A or more, an adsorption capacity of 15 g or more benzene per 100 grams support, and a pore wall thickness of 25 A or less.

Example 1 of the instant application uses the method disclosed in Beck's Example 41 to prepare the inventive support of the instant claims with  $d_{100}$  value of 82A, average pore size of 89A, and a wall thickness of about 6A.

Beck teaches a support meets all of the limitation of the instant claims except Beck is silent about the pore wall thickness (col. 5, line 17 to col. 6, line 25, and col. 27, claim 1).

Beck's Example 41 demonstrates the preparation of a porous support having a  $d_{100}$  peak value of 102A, and an adsorption capacity of 25 g benzene per 100 grams support. It is note Beck's Example 41 does not disclose the average pore size and the pore wall thickness. The pore size of Beck's Example 41 must be in the claimed ranges since Beck teaches all of the disclosed inventive examples to have pore size of at least about 13A. The average pore size and the pore wall thickness are characteristics

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related to the  $d_{100}$  peak value and the adsorption capacity. In general, the larger the  $d_{100}$  peak value and the larger adsorption capacity, the larger the pore size and the thinner the pore wall. Based in the  $d_{100}$  peak value and an adsorption capacity of Beck's Example 41, and the factor that the support disclosed in the prior art are made by substantially similar process disclosed in the instant specification, one of the ordinary skill in the art would have expected that the claimed limitations such as pore wall would be inherent in Beck's support.

Even if the claimed properties are not inherent in the polymers of the prior art examples, it would still have been obvious to a skilled artisan to arrive at the claimed subject matter because it appears that the claimed subject matter is within the generic disclosure of the prior art and expected to work.

Once a product appearing to be substantially identical is found and a 35 USC 102/103 rejection made, the burden of proof is shifted to the applicant to show an unobvious difference. In re Fitzgerald, 205 USPQ 594. In re Fessmann, 180 USPQ 324. Applicants have not met their burden to demonstrate an unobvious difference between the claimed product and the products of the prior art examples.

Similar rejections are also made over the working examples of Beck et al. (US 5,200,058).

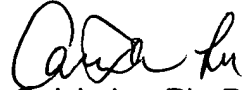
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (571) 272-1106. The examiner can normally be reached from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful and the matter is urgent, the examiner's supervisor, David Wu, can be reached at (571) 272-1114. The fax numbers for the organization where this application or proceeding is assigned is (571) 273-8300.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

A handwritten signature in black ink, appearing to read 'Caixia Lu'.

Caixia Lu, Ph. D.  
Primary Examiner  
March 3, 2006